

UNIVERSITY OF EDUCATION, WINNEBA-KUMASI

FACULTY OF TECHNOLOGY EDUCATION

DEPARTMENT OF EDUCATION OF TECHNOLOGY

COURSE OUTLINES

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| COURSE TITLE: | WOODWORK MATERIALS |
| COURSE CODE: | DTE 114 |
| CREDITS | 2 |
| LEVEL | 100 |
| SEMESTER: | ONE |
| COURSE LECTURER: | STEPHEN JOBSON MITCHUAL |

COURSE OBJECTIVE

Solid woods Veneer and plywood's are no longer the only material used in woodworking. Plastics, metals, glass. Ceramics, leather etc are all currently included as industrial materials for wood works. This course is designed to create an in-depth understanding of physical and working properties of wood and wood related material as well as the way theses properties influence selection and usage. This awareness is of prime importance to the designer (students) in this ability to identify and select the right types of material for project in woodworks.

AREAS OF COVERAGE

- i. Forest and Forest Trees
- ii. Hardwood and softwood
- iii. Gross features of wood
- iv. Identification of some commercial tropical timbers, their physical; and strength properties
- v. Moisture in wood
- vi. Density of wood and it's practical significance
- vii. Seasoning and preservation of wood
- viii. Defect in timber and its effect on wood utilization
- ix. Manufactured Boards
- x. Wood related materials(Plastics, Fasteners, Adhesives Glass and Ceramics etc
- xi. Wood Adhesives

METHODOLOGY

This course is practical biased and will be taught through problem solving activities. A variety of methods shall therefore be used to teach the course.

These include:

- Lecture
- Demonstration
- Discussion
- Group presentation
- Educational visit
- Practical activities

MODE OF ASSESSMENT

The assessment shall be in the form of end of semester examination and continuous assessment. The end of semester examination will attract 60% whilst the continuous assessment will constitute 40% of the total marks.

REFERENCES

- Bolt W. (1996) **Basic engineering, educational and professional**. Publishing Ltd. London.
- Bruce, J.B. (1991) **Work shop processes practices and materials**. Edward Arnold Publishers.
- Clifton, R.H. (1971) **Principles of planned maintenance**.
- Desch, H.E. and J.M. Dinwoodie (1993) **Timber, Its structure properties and utilization**
Macmillan Press Ltd.
- Fierer, J.L. and G.R. Hutchings (1986) **Carpentry and building construction**
Macmillan Press Ltd.
- Kollmann, F.P. and W.A Cote, Jr (1967) **Principle of Wood Science and Technology**.
Springer-Verlag Berlin Heidelberg. New York.

- Krar. S.F. and Oswald (1990) **Technology of Machine Tools**. MacGrawn Hill Inc.
- Okai R, Mitchual, S.J. and Frimpong-Mensah (2006) **Optimization techniques for minimizing saw teeth deflection and lumber thickness variation**. Journal of precision engineering. NY. USA Vol.30.pp 39-46
- Voisey, N.S. (1987) **Wood Machining. (A complete Guide to Effective and Safe Working Practices)** Stobart &Son Ltd. London.